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10/757,620	01/14/2004	Jeffrey Wannamaker	TVW/APP51US	4798

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EXAMINER	
ZHEN, LI B	
ART UNIT	**PAPER NUMBER**
2194	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/757,620	WANNAMAKER ET AL.	
	Examiner	Art Unit	
	Li B. Zhen	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 March 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-17 have been examined.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the specification fails to provide antecedent basis for the term "computer readable medium".

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 16 and 17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 16 and 17 recite a "computer readable medium" and the specification fails to provide antecedent bases for this limitation [see objection to the specification above]. Without antecedent basis for "computer readable medium", it is unclear if the limitation intended to be the same as the storage media described as part of the disclosed program product or whether it's intended to be broader than the disclosed storage media. It is believed that the limitation "computer readable medium" is intended to claim something broader than the disclosed storage media and cover signals, waves and other forms of transmission media, that carry instructions. Therefore, the limitation

"computer readable medium" is not limited to physical articles or objects which constitute a manufacture within the meaning of 35 USC 101 and enable any functionality of the instructions carried thereby to act as a computer component and realize their functionality. As such, the claim is not limited to statutory subject matter and is therefore non-statutory.

Response to Amendment

5. Amendment to claim 9 overcomes the rejection under 35 U.S.C. 112 second paragraph; therefore, the rejection is withdrawn.

6. Amendment to claim 15 overcomes the rejection under 35 U.S.C. 101; therefore, the rejection is withdrawn.

Response to Arguments

7. Applicant's arguments filed 3/7/2008 have been fully considered but they are not persuasive. In response to the Non-Final Office Action dated 05/07/2007, applicant argues that Schmidt does not disclose modifying a JAR file by removing unnecessary information not needed for executing an application as is specifically claimed by the presently claimed invention [p. 18].

In response to applicant's arguments, examiner respectfully disagrees and notes that the claims recite processing a Java Archive file to provide an interpretable application file. Schmidt discloses processing a Java Archive file [original archive file;

col. 9, line 65 – col. 10, line 22] to create an interpretable application file [synthesized archive file; col. 10, lines 46 – 60]. Specifically, Schmidt teaches creating a synthesized archive file by executing a sequence of "copy," and/or "delete" operations on the entries in either the original archive, on the entries in the difference archive file, and/or on the entries in the synthesized archive file in progress [col. 12, line 60 – col. 13, line 16]. Therefore, Schmidt teaches modifying a Java Archive file [delete operations on the entries in the original archive; col. 12, line 60 – col. 13, line 16] to provide an interpretable application file.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. **Claims 1-3, 7-9 and 13-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Schmidt (U.S. 6,535,894).**

Per Claim 1:

The Schmidt patent discloses:

- removing from said JAR file at least a portion of information not necessary for executing said application ("...unnecessary files in the original archive file ... are deleted if so desired for a particular implementation ..." in column 15, lines 57-65 and col. 12, line 60 – col. 13, line 16)

- mapping at least one of application defined interface, class, field and method names to shorter names ("... file names ..." in column 12, lines 1-17)

- and mapping at least one of target environment defined interface, class, field and method names to corresponding target device names ("... a new entry ..." in column 12, lines 18-35).

Per Claim 2:

The Schmidt patent discloses:

- wherein said step of removing comprises: removing unnecessary byte codes from said JAR file (column 15, lines 57-65).

Per Claim 3:

The Schmidt patent discloses:

- wherein said step of removing comprises: removing at least one of private unreferenced methods and fields from said JAR file (column 15, lines 57-65).

Per Claim 7:

The Schmidt patent discloses:

- further comprising: preferentially remapping application references to at least one of target environment defined interface, class, field and method names (column 12, lines 18- 35).

Per Claim 8:

The Schmidt patent discloses:

- wherein: a target environment obfuscation is provided in which symbols used in the target environment are replaced with shorter names (column 12, lines 3-1 1).

Per Claim 9:

The Schmidt patent discloses:

- wherein: an application obfuscation is provided in which symbols used in an application are replaced with shorter names that do not overlap the names used for target environment obfuscation (column 12, lines 11-17).

Per Claim 13:

The Schmidt patent discloses:

- wherein: said mapping steps are only used for mapping private symbols (column 12, lines 18-35).

Per Claim 14:

The Schmidt patent discloses:

- removing at least a portion of at least one of non-critical archive information, class information and unreferenced member information from a Java Archive file including an application ("... unnecessary files in the original archive file ... are deleted if so desired for a particular implementation ..." in column 15, lines 57-65 and col. 12, line 60 – col. 13, line 16)

- replacing at least one of interface, class, field and method names with corresponding shorter interface, class, field and method names ("... file names ..." in column 12, lines 1-1 7)

- replacing at least one of target environment defined interface, class, field and method names with corresponding target device interface, class, field and method names ("... a new entry ..." in column 12, lines 18-35).

Per Claim 15:

The Schmidt patent discloses:

- iteratively solving application defined and target environment defined class, field and method names to interpret application byte codes presented within a ground Java Archive file (Fig. 11, item 744, "MORE ENTRIES IN TARGET?" and column 15, line 11 to column 16, line 29) to produce a minimized JAR file (col. 12, line 60 – col. 13, line 16).

Per Claim 16:

This is a computer readable medium version of the claimed method discussed above, claim 1, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also anticipated by Schmidt.

Per Claim 17:

This is a computer program product version of the claimed method discussed above, claim 1, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also anticipated by Schmidt.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. **Claims 4-6 and 10-1 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt (U.S. 6,535,894) in view of Factor (U.S. 6,732,108).**

Per Claim 4:

The rejection of claim 1 is incorporated, and further, Schmidt does not explicitly teach identifying within said JAR file instances of duplicate strings; and remapping each duplicate string to a corresponding initial string. Factor teaches identifying within said JAR file instances of duplicate strings; and remapping each duplicate string to a corresponding initial string (column 11, lines 27-38).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the method disclosed by Schmidt to include identifying within said JAR file instances of duplicate strings; and remapping each duplicate string to a corresponding initial string using the teaching of Factor. The modification would be obvious because one of ordinary skill in the art would be motivated to eliminate duplicate constants by moving them to a shared table (Factor, column 2, lines 21-26).

Per Claim 5:

The rejection of claim 1 is incorporated, and further, Schmidt does not explicitly teach identifying within said JAR file instances of strings; providing a table to hold one

instance of each identified string; and remapping each identified string to a corresponding string table entry.

Factor teaches identifying within said JAR file instances of strings; providing a table to hold one instance of each identified string; and remapping each identified string to a corresponding string table entry (column 11, lines 27-38).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the method disclosed by Schmidt to include identifying within said JAR file instances of strings; providing a table to hold one instance of each identified string; and remapping each identified string to a corresponding string table entry using the teaching of Factor. The modification would be obvious because one of ordinary skill in the art would be motivated to eliminate duplicate constants by moving them to a shared table (Factor, column 2, lines 2 1-26).

Per Claim 6:

The rejection of claim 1 is incorporated, and further, Schmidt does not explicitly teach further comprising at least one of the following steps: (a) removing unreferenced constant pool entries for at least one class; (b) mapping constant pool entry names to fixed length names; and (c) sorting constant pool entries by type. Factor teaches further comprising at least one of the following steps: (a) removing unreferenced constant pool entries for at least one class; (b) mapping constant pool entry names to fixed length names; and (c) sorting constant pool entries by type (column 11, lines 35-38).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the method disclosed by Schmidt to include further comprising at least one of the following steps: (a) removing unreferenced constant pool entries for at least one class; (b) mapping constant pool entry names to fixed length names; and (c) sorting constant pool entries by type using the teaching of Factor. The modification would be obvious because one of ordinary skill in the art would be motivated to eliminate duplicate constants by moving them to a shared table actor, column 2, lines 21-26).

Per Claim 10:

The rejection of claim 1 is incorporated, and further, Schmidt does not explicitly teach mapping constant pool entry names to names having a fixed length. Factor teaches mapping constant pool entry names to names having a fixed length (column 10, line 64 to column 11, line 3).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the method disclosed by Schmidt to include mapping constant pool entry names to names having a fixed length using the teaching of Factor. The modification would be obvious because one of ordinary, skill in the art would be motivated to eliminate duplicate constants by moving them to a shared table (Factor, column 2, lines 2 1-26).

Per Claim 11:

The rejection of claim 10 is incorporated, and Factor further teaches further comprising:

moving strings from the constant pool to a common string pool (column 10, line 64 to column 11, line 3).

Per Claim 12:

The rejection of claim 1 is incorporated, and further, Schmidt does not explicitly teach further comprising: assigning a global name to at least one of application and target environment methods of each interface class. Factor teaches further comprising: assigning a global name to at least one of application and target environment methods of each interface class (column 10, line 64 to column 11, line 3).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the method disclosed by Schmidt to include further comprising: assigning a global name to at least one of application and target environment methods of each interface class using the teaching of Factor. The modification would be obvious because one of ordinary skill in the art would be motivated to eliminate duplicate constants by moving them to a shared table (Factor, column 2, lines 21-26).

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

CONTACT INFORMATION

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (571) 272-3768. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571)272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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